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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,350	06/21/2005	Helmut G. Klausing	3926.170	2541
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EXAMINER				
PECTIE, JORGE O				
ART UNIT		PAPER NUMBER		
3664				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/540,350

## Applicant(s)

KLAUSING ET AL.

## Examiner

Jorge O. Peche

## Art Unit

3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/CIS-100)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date 09/06/2006

## DETAILED ACTION

### *Claim Objections*

1. Claims 4-8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to a specific claim in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jin et al. (Industrial Electronics, Control, Instrumentation, and Automation, 1992. Power Electronics and Motion Control., Proceedings of the 1992 International Conference on Publication Date: 9-13 Nov 1992. On page(s): 1599-1603 vol.3) in view of Braeunl et al. (Pub No.: WO 2004/029877 A2) translation (Pub. No. US 2007/0165908 A1).**

Regarding **claims 1-3, 6, 7**, Jin discloses an advance dynamic obstacle detecting system for railway comprising:

- A laser unit and image sensor (IR and radar sensor) for detecting obstacle in a railway (see abstract, page 1599, col. 1, par. 2 – col. 2, par. 4; Figures 1-2).
- A railroad vehicle to operate accordance to the principle of rails/wheels (see abstract and page 1599, col. 1, par. 4-col. 2, par. 1; Figure 5).

However, Jin's invention fails to disclose an obstacle warning system comprising a sensor oriented transversal to the direction of the railborne vehicle.

However, Braeunl teaches a device for video-based observation and measurement of the lateral environment of a vehicle to determine object significantly elevated from the surface of a road (see abstract, page 1, par. 5; page 2, par. 27; Figures 1).

As Jin discloses an advance dynamic obstacle detecting system for railway comprising a laser unit and image sensor for detecting obstacle in the railway, a person of ordinary skill in the art, upon reading the reference, would also have recognized the desirability of improve apparatus to determine damage railroad and object on the adjacent railway. Braeunl teaches a device for video-based observation and measurement of the lateral environment of a vehicle to determine object significantly elevated from the surface of a road, which can be a railroad. Given the teaching of Braeunl, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jin's invention to incorporate a camera and/or radar perpendicular to the vehicle trajectory to detect dangerous object blocking a road.

Doing so would enhance an advance dynamic obstacle detecting system capable to spot not only dangerous object in a traveling road and/or damage railroad, but also to detect dangerous object on adjacent road.

Regarding **claim 4**, Jin discloses multiple sensor types, which data form a basis for evaluation (see abstract, page 1599, col. 1, par. 2 – col. 2, par. 4; page 1600, col. 1, par. 1 – col.2, par. 6; Figures 1-4).

Regarding **claim 5**, Jin discloses image sensors, which are provided spaced apart from each other with respect to the direction of travel, and a subtracter unit and edge detector for correlating the image sensor data (see page 1600, par. 3 – page 1602, col. 1, par. 1; Figures 1-7).

Regarding **claims 7-8**, Jin discloses a laser unit and image sensor (IR and radar sensor) for detecting obstacle in the railway surrounding and evaluating the quality of the railway, for interferences regarding the travel dynamics of the vehicle, and for locationally fixing the vehicle (see abstract, page 1599, col. 1, par. 2 – col. 2, par. 4; Figures 1-2).

However Jin fails to disclose an obstacle warning system comprising a means for automatic recognition of land based anomalies along a railway and the sensors are directed in both traverse directions of the railborne vehicle.

However, Braeunl teaches a device for video-based observation and measurement of the lateral environment of a vehicle to determine object significantly elevated from the surface of a road, which can be a railroad (automatic recognition of land based anomalies along a railway). The lateral video base observation can monitor in both direction of the vehicle direction as the vehicle moves forward and backward (see abstract, page 1, par. 5; page 2, par. 27; Figures 1).

Given the teaching of Braeunl, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Jin's invention to incorporate a camera and/or radar perpendicular to the vehicle trajectory to detect dangerous object blocking a road.

Doing so would enhance an advance dynamic obstacle detecting system capable to spot not only dangerous object in a traveling road and/or damage railroad, but also to detect dangerous object on adjacent road.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge O. Peche whose telephone number is (571)270-1339. The examiner can normally be reached on 8:30 am - 5:30 pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi H. Tran can be reached on 571-272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jorge O Peche/

Examiner, Art Unit 3664

July 9, 2008

/Khoi H Tran/

Supervisory Patent Examiner, Art Unit 3664